

REMARKS-General

1. Upon review of the original specification and in light of the observation of the Examiner noted in the above Office Action, the applicant has submitted a completely revised substitute specification which is deemed to more clearly and distinctly describe the subject matter of the instant invention, and which provides full antecedent basis to the newly drafted claims. No new matter has been included in the substitute specification.
2. A marked-up copy is also submitted to show additions to and/or deletions from the original specification and the substitute specification includes the same changes as are indicated in the marked-up copy of the original specification showing addition and/or deletions.
3. The newly drafted independent claims 13, 17, and 21 incorporate all structural limitations of the original claims 1, 4, and 7 and include further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 13-26 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.
4. The non-elected claims 10-12 are withdrawn from this application.
5. A set of formal drawings, Figs. 1, 3, and 4, are re-submitted herewith to replace the corresponding original figures in file upon the approval of the proposed drawing correction of Figures 1, 3, and 4.

Response to Rejection of the Specification under 35USC112

6. The applicant submits that the substitute specification describes the subject matter of the instant invention with sufficient clarity and detail to overcome the rejection thereof under 35USC112.

Response to Rejection of Claims 1-9 under 35USC112

7. The applicant submits that the newly drafted claims 13-39 particularly point out and distinctly claim the subject matter of the instant invention, as pursuant to 35USC112.

DRAWING AMENDMENTS

The applicant has been submitted the Drawing Correction figures 1, 3, and 4 on May 06, 2002. The applicant respectfully re-submits the figures 1, 3, and 4. The figures 1, 3, and 4 have been amended in red ink along with the new element. A drawing amendment approval request form is enclosed herewith, as pursuant to MPEP 608.02(v). The description of Figure 1 is shown, on page 2, in the Background section of the specification to describe the old technology of file scanning. Figure 3 illustrates the "message authentication" of the instant invention.

Response to Rejection of Claims 1-9 under 35USC103

8. The Examiner rejected claims 1-9 over Groshon et al (US 6,351,811) in view of Bianco (EP 0467239), Blickenstaff et al (US 5,537,585), Menezes et al (Handbook of Applied Cryptography), and Thomson (US 5,276,874). Pursuant to 35 U.S.C. 103:

"(a) A patent may not be obtained thought the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made."

9. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

10. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Groshon et al which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Bianco and Blickenstaff et al at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

11. Accordingly, Groshon et al merely discloses a system for preventing transmission of data through computer network, wherein the system of Groshon et merely incorporates with one single computer without any mention of using two computer serves which are original web file server storing web file and a public web server for transmitting web file between the original web file from the original web file server to the web visitor. No such two-server system has been used before the instant invention. It is worth to mention that if only one computer service is used, it is unable to achieve the purpose of protecting the http file deposited on the server's storage such as

hard disk. When the hacker can intrude the server to modify the http file, the hacker can also modify or delete the original http file and the signature file that are deposited on the same server. The point is how to protect the original info or original web contents. In other words, Groshon's system cannot protect the http file because the original http file and the signature file can be deleted or modified by the hacker. If the original http file and the signature file can be deleted or modified, then the Groshon's way will fail.

12. The anti-alteration system of the instant invention protects the original info because the original info (the original web file) is stored in the original web server (as a private server) which uses a firewall to protect the original web server. Web visitor only communicates with the public web server to obtain the data therefrom without accessing the original web server. In other words, the original web contents and data will be isolated from Internet access via the anti-alteration system of the instant invention first in the industry.

13. Groshon et al merely discloses, in column 4, lines 50-63, the key feature of such system is the provision of a "validation" function associated with web server, wherein the validation is a process of verifying the integrity of data prior to transmission; the term "page validation" is used in the exemplary embodiments described because the data to be transmitted comprises Web pages. The validation process could be executed on another computer, could be an addition to a firewall, etc. Groshon et al fails to teach the system incorporates with a real-time-check device to check the web files for preventing the web files from being illegally altered. In other words, Groshon et al was no idea about link his way to a real web server such as Apache. Accordingly, the instant invention particularly mentions the real-time-check device in the specification that the system of the instant invention firstly achieves the real-time-check technology to check on the requested web content before the web content is sent out. In addition, the real-time-check technology is a very effective technology in handing execution files at Brower sides and various web contents containing pictures, sound, extensions like HTML, html, Text, GIF, JPEG, au, etc.

14. In addition, in column 5, lines 3-7, Groshon et al merely discloses the web page stored on web page storage can be validated prior to transmission by comparison of the page with a backup copy stored on backup web page storage or by comparison of a digital signature of the page with a control signature. Even though Groshon et al

mentions that they can put the original file and signature file to a remote computer, there are still two major issues of:

- (i) Cannot increase security - Hacker will easily intrude the remote computer through the network. Groshon et al merely could not invent any kind of security products designed between the computer and the remote computer for protecting the remote computer. If hacker can break though the front-end firewall mentioned by Groshon to intrude the computer, then hacker can also intrudes the remote computer more easily to delete and modify the original file or signature file; If hacker cannot break though the front-end firewall then no any reason to usage the system of Groshon et al to protect a web site. In other words, the total security of Groshon et al's system is just rely on the front-end firewall, the rest parts of Groshon et al's system which hit back on the front-end firewall is no value in the security industry; and
- (ii) Decrease the response speed – The translating rate of network is slower than the reading from the hard disk directory so much. It will be very slow when check a big web server system where have lot of web pages for compare each two files which on the separate computers.

15. Furthermore, in order to check the http file if there is any alteration, Groshon et al mentions two ways: one is using Authentication technology such as MD4, SHA, and so on and another one is directory comparing http file and original file. The authentication technologies can be found from many books about computer science in university easily, the comparing functions can be found from any computer language such as C, C++, php, java and so on. There is no new technology in Groshon's system.

16. The instant invention uses two computer servers that no other system is used before and contains the following distinctive features:

- (i) using one of the computer server (as a private-web-server computer to contain all the original web contents (not just http file only) and data base;
- (ii) using one or more computer server as public web server computer to serve the http server functions to Internet or outside network, to contain the safe-web-contents generated from the original web contents which with signature info generated

from the original web contents, do authentication checking the safe-web-contents before sending out to the web visitor;

(iii) protecting the original web contents in the private-web-server computer against the hacker intrusion, wherein a firewall is formed between the original web file server and the public web server; and

(iv) first solving the issue of protecting the web server function and web contents continuously even the hacker intrudes the web server in the industry.

17. Groshon et al fails to teach the encryption of web file. If there is no encryption of the web contents, the hacker can easily steal the info about how to access database from the web contents to intrude the database. This is a largest vulnerability in current Internet reported by experts because nowadays most web servers are connecting with database.

18. The instant invention is the first invention in the world to teach the encryption of web contents. This is a very difficult job that use encryption technology to protect web contents because the instant invention has to keep the rule of industry standard about the http protocol at the same time. Also, the instant invention solves the problems of response speed when decrypt the web contents encrypted if a request of the web visitor is received. In fact, there are so many kinds of encryption or cipher in the industry such as DES, IDEA, 3DES, RSA, etc. But there is no other invention can develop the system of encryption of web before the instant invention.

19. The instant invention is the first invention about how to take the action of Authentication check and decryption with the web server, wherein this is very difficult invention that can guarantee the exposed time of defacement is 0 second. Groshon et al has no idea about the time and how to do this action of check file in his system.

20. Accordingly, Bianco merely teaches an encryption system based on Chaos theory but Bianco fails to teach the encryption system used for a web server system. It is worth to mention that the inventor of the instant invention invented a method and apparatus for encrypting and decrypting information using a digital chaos signal (US 5,696,826). Therefore, the instant invention incorporates with the well developed chaos encryption technology to enhance the protection of the web content.

21. Blickenstaff et al, on the other hand, merely teaches a disaster recovery that data are not only written to transfer units on to the data storage media of the first layer of secondary storage but are also written from the data storage media of the first layer of second storage on to backup media on a backup device. It is clearly that the backup system of Blickenstaff et al is different from the instant invention that the recoverable device encrypting the web files to create safe-web-files. Additional, there is not any device that can link the recovery function to a Web server such as Apache in the Blickenstaff's way. In other words, Blickenstaff's way is not designed for web server system.

22. Menezes et al merely mentions the message authentication codes (MACs) but never mention of any message authentication technology using chaos theory to check whether the web-content be altered or not. Also, Examiner fails to find any web server can run the encrypted web content. Additional, there is not any device that can link the message authentication technology to Web server such as Apache in the Menezes et al way. In other words, Meneze's way is not designed for web server system.

23. Thomson merely teaches a header of a file for creating a directory tree without any mention of any header information added to the web file to prevent the web file from being altered. In addition, we must consider how to delete the header from the file before sending out to the web visitor. In other words, the header taught by Thomson cannot be used for web contents. Additional, No device can link the header information management technology to Web server such as Apache in the Tomson's way.

24. The Examiner appears to reason that since Groshon et al teaches a system for preventing transmission of data through computer network, it would have been obvious to one skilled in the art to modify the system with Bianco, Blickenstaff et al, Menezes et al, and Thomson. But this is clearly **not** a proper basis for combining references in making out an obviousness rejection of the present claims. Rather, the invention must be considered as a whole and there must be something in the reference that suggests the combination or the modification. See Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984) ("The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination"), In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed.

Cir. 1984), ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.") *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

25. In the present case, there is no such suggestion. In any case, even combining Groshon et al, Bianco, Blickenstaff et al, Menezes et al, and Thomson would not provide the invention as claimed -- a clear indicia of nonobviousness. *Ex parte Schwartz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992), ("Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed."). That is, modifying Groshon et al with Bianco, Blickenstaff et al, Menezes et al, and Thomson, as proposed by the Examiner, would not provide an anti-alteration system for web content using two different web server computers and a real-time-check device to check the web file whether it is altered or not.

26. Applicant believes that neither Groshon et al, Bianco, Blickenstaff et al, Menezes et al, nor Thomson, separately or in combination, suggest or make any mention whatsoever of using two different web server computers and a real-time-check device to check the web file as recited in claims 13-39.

Commercial Success

27. The instant invention is about the next generation web server that is "Self-defending Web server". The applicant has developed products based on the instant invention named "BS-3GWeb-I-2400". Current Web servers such as Apache, Microsoft's IIS etc, were invented in the 20th Century and provide HTTP functions only. As the "Self-Defending" Web server of the instant invention, 3Gweb provides HTTP functions and also offers "Immunity", "Fault-Tolerance and Self-Healing" as well as "Maximum Security" functions for safeguard itself from server inside. The unique



technology enables the Web server to safeguard itself from known and unknown cyber attacks and HTTP viruses/worms. This most innovative next generation Web server provides an ultra-secure environment for a wide range of Web-based business, such as online-banking, e-commerce, e-business, Web-services, etc.

28. May 4, 2005, 3Gweb-I-2400 named Best of Interop Award at Networld+Interop 2005, Las Vegas US. "The process of selecting the winners was rigorous," said Ron Anderson editor for Network Computing and head judging team for the Best of Interop Awards. "BitShield's BS-3GWeb-I-2400 is the most innovative solution in the Network Software and Services category, and that's why we selected it as a Best of Interop winner". (see: <http://www.nwc.com/story/singlePageFormat.jhtml?articleID=162101510>)



29. This award and the comments of experts can proof the instant invention is "most innovative" and first in the Internet industry in the world. Also, it proofs there is no other invention providing a system using encryption, authentication, and recovery etc technology to protect the web contents.

30. The Rule 132 Declaration sets forth in detail evidence of the commercial success, which is an anti-alteration system for web content embodying claims 13-39 made and sold by the BitShield Corporation, the assignee of the present application. Based on this evidence, which both rebuts the *prima facie* of obviousness and establishes an important secondary factor of non-obviousness, namely commercial success, the Examiner is requested to reconsider and withdraw the obviousness rejection made against the instant invention as amended.

31. Applicant believes that for all of the foregoing reasons, all of the claims are in condition for allowance and such action is respectfully requested.

The Cited but Non-Applied References

32. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

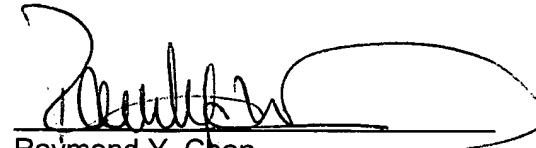
33. A total of sixteen claims, including two withdrawn claims, are presented. A check in an amount of US\$100.00 is submitted herewith to pay the additional filing fee of the

the four independent claims in excess of three. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 502111.

34. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 13-26 at an early date is solicited. The instant invention is actually reduced to practice and the inventor is ready to provide a demonstration of the instant invention in a live interview with the Examiner under the Examiner's request.

35. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service by First Class Mail, with sufficient postage, in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: July 25, 2005



Signature: Raymond Y. Chan
Person Signing: Raymond Y. Chan

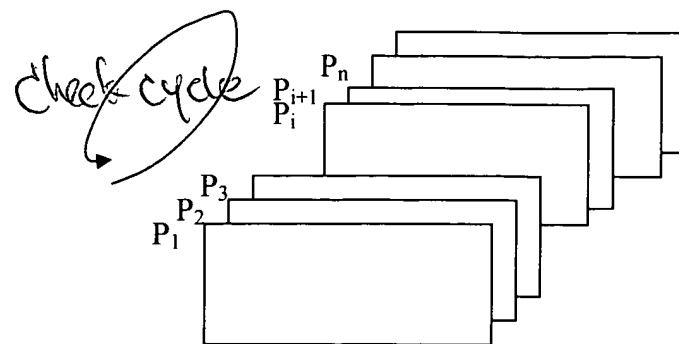


FIG. 1
PRIOR ART

Proposed Drawing Correction

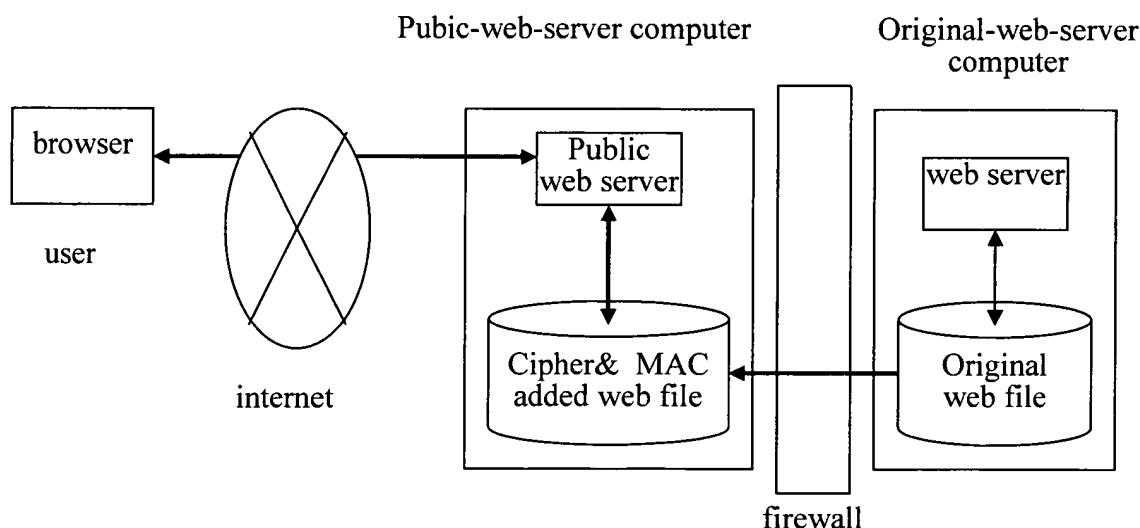


FIG. 2

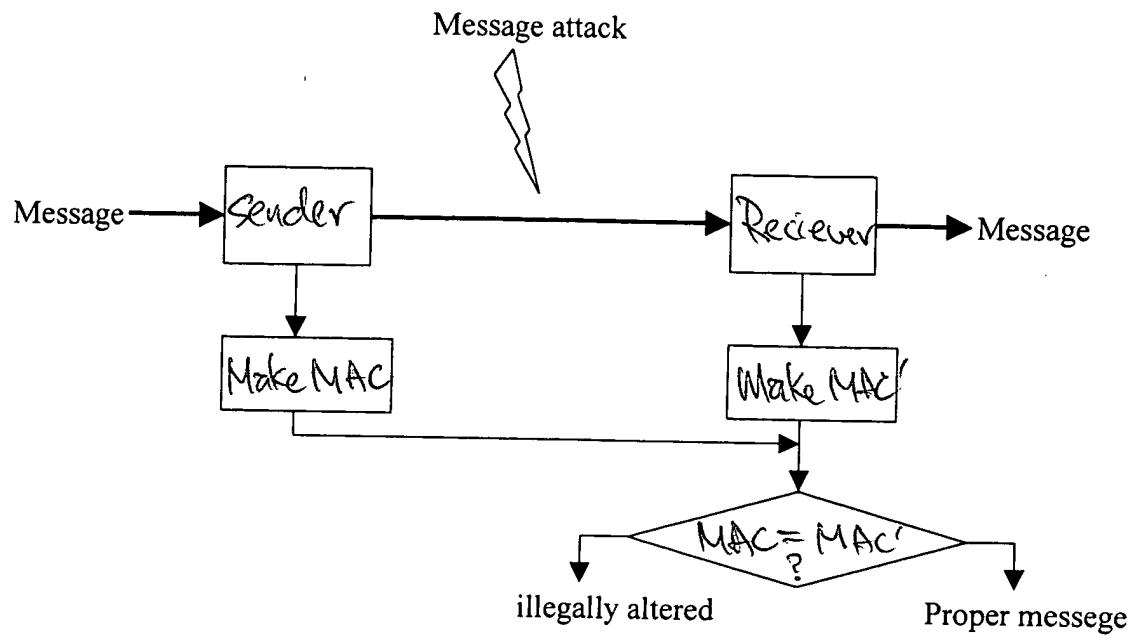


FIG. 3
Proposed Drawing Correction

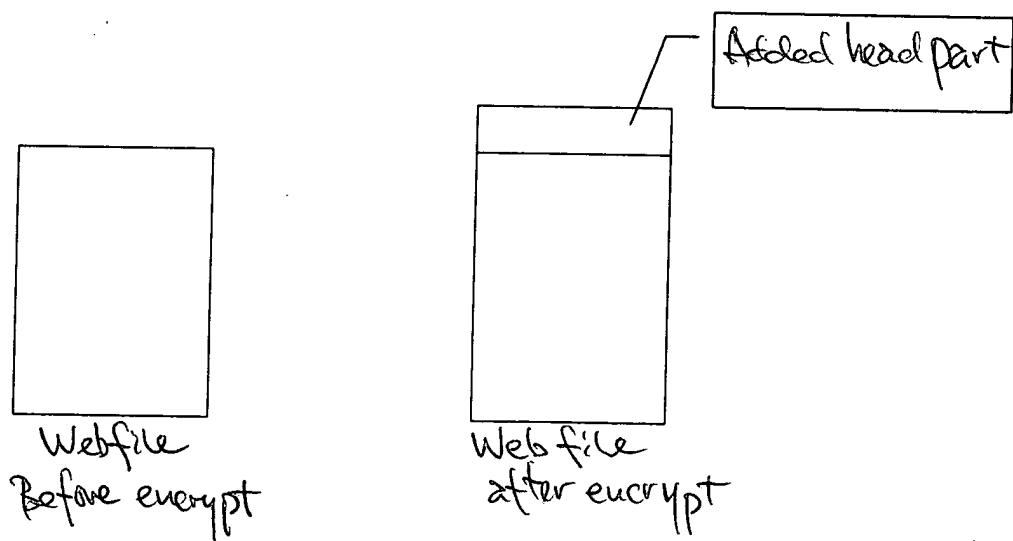


FIG. 4
Proposed Drawing Correction